SEQUENCE LISTING

(1) GENERAL INFORMATION:

    (i) APPLICANT: Dong, Fang
                 Lyamichev, Victor I.
                 Prudent, James R.

    (ii) TITLE OF INVENTION: TARGET-DEPENDENT REACTIONS USING
          STRUCTURE-BRIDGING OLIGONUCLEOTIDES

    (iii) NUMBER OF SEQUENCES: 123

    (iv) CORRESPONDENCE ADDRESS:
        (A) ADDRESSEE: MEDLEN & CARROLL, LLP
        (B) STREET: 220 Montgomery Street, Suite 2200
        (C) CITY: San Francisco
        (D) STATE: CA
        (E) COUNTRY: USA
        (F) ZIP: 94104

    (v) COMPUTER READABLE FORM:
        (A) MEDIUM TYPE: Floppy disk
        (B) COMPUTER: IBM PC compatible
        (C) OPERATING SYSTEM: PC-DOS/MS-DOS
        (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

    (vi) CURRENT APPLICATION DATA:
        (A) APPLICATION NUMBER: US
        (B) FILING DATE:
        (C) CLASSIFICATION:

    (viii) ATTORNEY/AGENT INFORMATION:
        (A) NAME: MacKnight, Kamrin T.
        (B) REGISTRATION NUMBER: 38,230
        (C) REFERENCE/DOCKET NUMBER: FORS-03345

    (ix) TELECOMMUNICATION INFORMATION:
        (A) TELEPHONE: (415) 705-8410
        (B) TELEFAX: (415) 397-8338

(2) INFORMATION FOR SEQ ID NO:1:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 391 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

```
AGCTCGTATG GCACCGGAAC CGGTAAGGAC GCGATCACCA GCGGCATCGA GGTCGTATGG      60

ACGAACACCC CGACGAAATG GGACAACAGT TTCCTCGAGA TCCTGTACGG CTACGAGTGG     120

GAGCTGACGA AGAGCCCTGC TGGCGCTTGG CAATACACCG CCAAGGACGG CGCCGGTGCC     180

GGCACCATCC CGGACCCGTT CGGCGGGCCA GGGCGCTCCC CGACGATGCT GGCCACTGAC     240

CTCTCGCTGC GGGTGGATCC GATCTATGAG CGGATCACGC GTCGCTGGCT GGAACACCCC     300
```

GAGGAATTGG CCGACGAGTT CGCCAAGGCC TGGTACAAGC TGATCCACCG AGACATGGGT   360

CCCGTTGCGA GATACCTTGG GCCGGTGGTC C   391

5   (2) INFORMATION FOR SEQ ID NO:2:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 391 base pairs
            (B) TYPE: nucleic acid
10   (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"
15

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

    AGCTCGTATG GCACCGGAAC CGGTAAGGAC GCGATCACCA CCGGCATCGA GGTCGTATGG   60

20 ACGAACACCC CGACGAAATG GGACAACAGT TTCCTCGAGA TCCTGTACGG CTACGAGTGG   120

    GAGCTGACGA AGAGCCCTGC TGGCGCTTGG CAATACACCG CCAAGGACGG CGCCGGTGCC   180

    GGCACCATCC CGGACCCGTT CGGCGGGCCA GGGCGCTCCC CGACGATGCT GGCCACTGAC   240
25
    CTCTCGCTGC GGGTGGATCC GATCTATGAG CGGATCACGC GTCGCTGGCT GGAACACCCC   300

    GAGGAATTGG CCGACGAGTT CGCCAAGGCC TGGTACAAGC TGATCCACCG AGACATGGGT   360

30 CCCGTTGCGA GATACCTTGG GCCGCTGGTC C   391

    (2) INFORMATION FOR SEQ ID NO:3:

        (i) SEQUENCE CHARACTERISTICS:
35   (A) LENGTH: 391 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear

40   (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

45 AGCTCGTATG GCACCGGAAC CGGTAAGGAC GCGATCACCA GCGGCATCGA GGTCGTATGG   60

    ACGAACACCC CGACGAAATG GGACAACAGT TTCCTCGAGA TCCTGTACGG CTACGAGTGG   120

50 GAGCTGACGA AGAGCCCTGC TGGCGCTTGG CAATACACCG CCAAGGACGG CGCCGGTGCC   180

    GGCACCATCC CGGACCCGTT CGGCGGGCCA GGGCGCTCCC CGACGATGCT GGCCACTGAC   240

    CTCTCGCTGC GGGTGGATCC GATCTATGAG CGGATCACGC GTCGCTGGCT GGAACACCCC   300

55 GAGGAATTGG CCGACGAGTT CGCCAAGGCC TGGTACAAGC TGATCCACCG AGACATGGGT   360

    CCCGTTGCGA GATACCTTGG GCCGCTGGTC C   391

60 (2) INFORMATION FOR SEQ ID NO:4:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 391 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
65   (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

5

AGCTCGTATG GCACCGGAAC CGGTAAGGAC GCGATCACCA CCGGCATCGA GGTCGTATGG   60

ACGAACACCC CGACGAAATG GGACAACAGT TTCCTCGAGA TCCTGTACGG CTACGAGTGG   120

10 GAGCTGACGA AGAGCCCTGC TGGCGCTTGG CAATACACCG CCAAGGACGG CGCCGGTGCC   180

GGCACCATCC CGGACCCGTT CGGCGGGCCA GGGCGCTCCC CGACGATGCT GGCCACTGAC   240

CTCTCGCTGC GGGTGGATCC GATCTATGAG CGGATCACGC GTCGCTGGCT GGAACACCCC   300

15

GAGGAATTGG CCGACGAGTT CGCCAAGGCC TGGTACAAGC TGATCCACCG AGACATGGGT   360

CCCGTTGCGA GATACCTTGG GCCGGTGGTC C   391

20 (2) INFORMATION FOR SEQ ID NO:5:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20 base pairs
        (B) TYPE: nucleic acid
25   (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"
30

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

AGCTCGTATG GCACCGGAAC   20

35 (2) INFORMATION FOR SEQ ID NO:6:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20 base pairs
        (B) TYPE: nucleic acid
40   (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"
45

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

TTGACCTCCC ACCCGACTTG   20

50 (2) INFORMATION FOR SEQ ID NO:7:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 21 base pairs
        (B) TYPE: nucleic acid
55   (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"
60

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

AGCTCGTATG GCACCGGAAC C   21

(2) INFORMATION FOR SEQ ID NO:8:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

GGACCAGCGG CCCAAGGTAT   20

(2) INFORMATION FOR SEQ ID NO:9:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 22 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

GGACCACCGG CCCAAGGTAT CT   22

(2) INFORMATION FOR SEQ ID NO:10:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 21 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

TTTTTGCCGC TGGTGATCGC G   21

(2) INFORMATION FOR SEQ ID NO:11:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 12 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

GGAGAGCCAT AG   12

(2) INFORMATION FOR SEQ ID NO:12:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 11 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

TGGTCTGCGG A   11

(2) INFORMATION FOR SEQ ID NO:13:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 11 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

GGACGACCGG G   11

(2) INFORMATION FOR SEQ ID NO:14:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 11 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

GGAGATTTGG G   11

(2) INFORMATION FOR SEQ ID NO:15:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 11 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

CCGCGAGACT G   11

(2) INFORMATION FOR SEQ ID NO:16:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 12 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

CTAGCCGAGT AG   12

(2) INFORMATION FOR SEQ ID NO:17:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 11 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

TGTTGGGTCG C   11

(2) INFORMATION FOR SEQ ID NO:18:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 11 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

CCGCGAGACC G   11

(2) INFORMATION FOR SEQ ID NO:19:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 11 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

CCGCAAGACC G   11

(2) INFORMATION FOR SEQ ID NO:20:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 289 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

```
GATTCTGTCT TCACGCAGAA AGCGTCTAGC CATGGCGTTA GTATGAGTGT CGTGCAGCCT      60

CCAGGACCCC CCCTCCCGGG AGAGCCATAG TGGTCTGCGG AACCGGTGAG TACACCGGAA     120

TTGCCAGGAC GACCGGGTCC TTTCTTGGAT CAACCCGCTC AATGCCTGGA GATTTGGGCG     180

TGCCCCCGCA AGACTGCTAG CCGAGTAGTG TTGGGTCGCG AAAGGCCTTG TGGTACTGCC     240

TGATAGGGTG CTTGCGAGTG CCCCGGGAGG TCTCGTAGAC CGTGCAATC               289
```

(2) INFORMATION FOR SEQ ID NO:21:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 286 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

```
GATTCTGTCT TCACGCAGAA AGCGTCTAGC CATGGCGTTA GTATGAGTGT CGTGCAGCCT      60

CCAGGTCCCC CCCTCCCGGG AGAGCCATAG TGGTCTGCGG AACCGGTGAG TACACCGGAA     120

TTGCCAGGAC GACCGGGTCC TTTCTTGGAT CAACCCGCTC AATGCCTGGA GATTTGGGCG     180

TGCCCCCGCG AGACTGCTAG CCGAGTAGTG TTGGGTCGCG AAAGGCCTTG TGGTACTGCC     240

TGATAGGGTG CTTGCGAGTG CCCCGGGAGG TCTCGTAGAC CGTGCA                   286
```

(2) INFORMATION FOR SEQ ID NO:22:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 289 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

```
GATTCTGTCT TCACGCAGAA AGCGTCTAGC CATGGCGTTA GTATGAGTGT CGTACAGCCT      60

CCAGGCCCCC CCCTCCCGGG AGAGCCATAG TGGTCTGCGG AACCGGTGAG TACACCGGAA     120

TTGCCGGGAA GACTGGGTCC TTTCTTGGAT AAACCCACTC TATGCCCGGC CATTTGGGCG     180
```

TGCCCCCGCA AGACTGCTAG CCGAGTAGCG TTGGGTTGCG AAAGGCCTTG TGGTACTGCC   240

TGATAGGGTG CTTGCGAGTA CCCCGGGAGG TCTCGTAGAC CGTGCAATC   289

5   (2) INFORMATION FOR SEQ ID NO:23:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 289 base pairs
            (B) TYPE: nucleic acid
10   (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
             (A) DESCRIPTION: /desc = "DNA"
15
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

    GATTCTGTCT TCACGCAGAA AGCGCCTAGC CATGGCGTTA GTACGAGTGT CGTGCAGCCT   60

20 CCAGGACCCC CCCTCCCGGG AGAACCATAG TGGTCTGCGG AACCGGTGAG TACACCGGAA   120

    TCGCTGGGGT GACCGGGTCC TTTCTTGGAG CAACCCGCTC AATACCCAGA AATTTGGGCG   180

    TGCCCCCGCG AGATCACTAG CCGAGTAGTG TTGGGTCGCG AAAGGCCTTG TGGTACTGCC   240
25
    TGATAGGGTG CTTGCGAGTG CCCCGGGAGG TCTCGTAGAC CGTGCAATC   289

    (2) INFORMATION FOR SEQ ID NO:24:

30   (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 18 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear
35
        (ii) MOLECULE TYPE: other nucleic acid
             (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:
40
    CTCGCAAGCA CCCTATCA   18

    (2) INFORMATION FOR SEQ ID NO:25:

45   (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 21 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear
50
        (ii) MOLECULE TYPE: other nucleic acid
             (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:
55
    GCAGAAAGCG TCTAGCCATG G   21

    (2) INFORMATION FOR SEQ ID NO:26:

60   (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 244 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear
65

        (ii) MOLECULE TYPE: other nucleic acid
             (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

GCAGAAAGCG TCTAGCCATG GCGTTAGTAT GAGTGTCGTG CAGCCTCCAG GACCCCCCCT   60

CCCGGGAGAG CCATAGTGGT CTGCGGAACC GGTGAGTACA CCGGAATTGC CAGGACGACC   120

GGGTCCTTTC TTGGATCAAC CCGCTCAATG CCTGGAGATT TGGGCGTGCC CCCGCAAGAC   180

TGCTAGCCGA GTAGTGTTGG GTCGCGAAAG GCCTTGTGGT ACTGCCTGAT AGGGTGCTTG   240

CGAG   244

    (2) INFORMATION FOR SEQ ID NO:27:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 244 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
             (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

GCAGAAAGCG TCTAGCCATG GCGTTAGTAT GAGTGTCGTG CAGCCTCCAG GTCCCCCCCT   60

CCCGGGAGAG CCATAGTGGT CTGCGGAACC GGTGAGTACA CCGGAATTGC CAGGACGACC   120

GGGTCCTTTC TTGGATCAAC CCGCTCAATG CCTGGAGATT TGGGCGTGCC CCCGCGAGAC   180

TGCTAGCCGA GTAGTGTTGG GTCGCGAAAG GCCTTGTGGT ACTGCCTGAT AGGGTGCTTG   240

CGAG   244

    (2) INFORMATION FOR SEQ ID NO:28:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 244 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
             (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

GCAGAAAGCG TCTAGCCATG GCGTTAGTAT GAGTGTCGTA CAGCCTCCAG GCCCCCCCCT   60

CCCGGGAGAG CCATAGTGGT CTGCGGAACC GGTGAGTACA CCGGAATTGC CGGGAAGACT   120

GGGTCCTTTC TTGGATAAAC CCACTCTATG CCCGGCCATT TGGGCGTGCC CCCGCAAGAC   180

TGCTAGCCGA GTAGCGTTGG GTTGCGAAAG GCCTTGTGGT ACTGCCTGAT AGGGTGCTTG   240

CGAG   244

(2) INFORMATION FOR SEQ ID NO:29:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 244 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

```
GCAGAAAGCG CCTAGCCATG GCGTTAGTAC GAGTGTCGTG CAGCCTCCAG GACCCCCCCT          60

CCCGGGAGAA CCATAGTGGT CTGCGGAACC GGTGAGTACA CCGGAATCGC TGGGGTGACC         120

GGGTCCTTTC TTGGAGCAAC CCGCTCAATA CCCAGAAATT TGGGCGTGCC CCCGCGAGAT         180

CACTAGCCGA GTAGTGTTGG GTCGCGAAAG GCCTTGTGGT ACTGCCTGAT AGGGTGCTTG         240

CGAG                                                                     244
```

(2) INFORMATION FOR SEQ ID NO:30:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 216 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

```
CAGAAAGGGT TTAGCCATGG GGTTAGTATG AGTGTCGTAC AGCCTCCAGG CCCCCCCCTC          60

CCGGGAGAGC CATAGTGGTC TGCGGAACCG GTGAGTACAC CGGAATTGCC GGGAAGACTG         120

GGTCCTTTCT TGGATAAACC CACTCTATGC CCGGCCATTT GGGCGTGCCC CCGCAAGACT         180

GCTAGCCGAG TAGCGTTGGG TTGCGAAAGG CCTTGT                                   216
```

(2) INFORMATION FOR SEQ ID NO:31:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 244 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

```
CAGAAAGGGT TTAGCCATGG CGTTAGTATG AGTGTCGTGC AGCCTCCAGG ACCCCCCCTC          60

CCGGGAGAGC CATAGTGGTC TGCGGAACCG GTGAGTACAC CGGAATTGCC AGGACGACCG         120

GGTCCTTTCT TGGATAAAAC CCGCTCAATG CCTGGAGATT TGGGCGTGCC CCCGCAAGAC         180
```

TGCTAGCCGA GTAGTGTTGG GTCGCGAAAG GCCTTGTGGT ACTGCCTGAT AGGGTGCTTG   240

CAAG   244

(2) INFORMATION FOR SEQ ID NO:32:

      (i) SEQUENCE CHARACTERISTICS:
         (A) LENGTH: 239 base pairs
         (B) TYPE: nucleic acid
         (C) STRANDEDNESS: double
         (D) TOPOLOGY: linear

      (ii) MOLECULE TYPE: other nucleic acid
         (A) DESCRIPTION: /desc = "DNA"

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

GCAGAAAGGT TTAGCCATGG GTTAGTATGA GTGTCGTGCA GCCTCCAGGA CCCCCCCTCC   60

CGGGAGAGCC ATAGTGGTCT GCGGAACCGG TGAGTACACC GGAATTGCCA GGACGACCGG   120

GTCCTTTCTT GGATTAACCC GCTCAATGCC TGGAGATTTG GGCGTGCCCC CGCAAGACTG   180

CTAGCCGAGT AGTGTTGGGT CGCGAAAGGC CTTGTGGTAC TGCCTGATAG GGTGCTTGC   239

(2) INFORMATION FOR SEQ ID NO:33:

      (i) SEQUENCE CHARACTERISTICS:
         (A) LENGTH: 240 base pairs
         (B) TYPE: nucleic acid
         (C) STRANDEDNESS: double
         (D) TOPOLOGY: linear

      (ii) MOLECULE TYPE: other nucleic acid
         (A) DESCRIPTION: /desc = "DNA"

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

GCAGAAAGGT TTAGCCATGG GGTTAGTATG AGTGTCGTAC AGCCTCCAGG ACCCCCCCTC   60

CCGGGAGAGC CATAGTGGTC TGCGGAACCG GTGAGTACAC CGGAATTGCC AGGACGACCG   120

GGTCCTTTCT TGGATAAACC CGCTCAATGC CTGGAGATTT GGGCGTGCCC CCGCAAGACT   180

GCTAGCCGAG TAGTGTTGGG TCGCGAAAGG CCTTGTGGTA CTGCCTGATA GGGTGCTTGC   240

(2) INFORMATION FOR SEQ ID NO:34:

      (i) SEQUENCE CHARACTERISTICS:
         (A) LENGTH: 240 base pairs
         (B) TYPE: nucleic acid
         (C) STRANDEDNESS: double
         (D) TOPOLOGY: linear

      (ii) MOLECULE TYPE: other nucleic acid
         (A) DESCRIPTION: /desc = "DNA"

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

GCAGAAAGGG TTTAGCCATG GCGTTAGTAT GAGTGTCGTA CAGCCTCCAG GCCCCCCCCT   60

CCCGGGAGAG CCATAGTGGT CTGCGGAACC GGTGAGTACA CCGGAATTAC CGGAAAGACT   120

GGGTCCTTTC TTGGATAAAC CCACTCTATG TCCGGTCATT TGGGCGTGCC CCCGCAAGAC   180

TGCTAGCCGA GTAGCGTTGG GTTGCAAAGG CCTTGTGGTA CTGCCTGATA GGGTGCTTGC   240

(2) INFORMATION FOR SEQ ID NO:35:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 240 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

       (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

CAGAAAGGGT TTAGCCATGG GGTTAGTACG AGTGTCGTGC AGCCTCCAGG CCCCCCCCTC   60

CCGGGAGAGC CATAGTGGTC TGCGGAACCG GTGAGTACAC CGGAATCGCT GGGGTGACCG   120

GGTCCTTTCT TGGAGCAACC CGCTCAATAC CCAGAAATTT GGGCGTGCCC CCGCGAGATC   180

ACTAGCCGAG TAGTGTTGGG TCGCGAAAGG CCTTGTGGTA CTGCCTGATA GGGTGCTTGC   240

(2) INFORMATION FOR SEQ ID NO:36:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 239 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

       (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

AGAAAGCGTT TAGCCATGGC GTTAGTATGA GTGTTGTGCA GCCTCCAGGA CCCCCCCTCC   60

CGGGAGAGCC ATAGTGGTCT GCGGAACCGG TGAGTACACC GGAATTGCCA GGACGACCGG   120

GTCCTTTCTT GGATCAACCC GCTCAATGCC TGGAGATTTG GCGTGCCCC CGCAAGACTG   180

CTAGCCGAGT AGTGTTGGGT CGCGAAAGGC CTTGTGGTAC TGCCTGATAG GGTGCTTGC   239

(2) INFORMATION FOR SEQ ID NO:37:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 232 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

       (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

GTTTAGCCAT GGCGTTAGTA TGAGTGTCGT GCAGCCTCCA GGACCCCCCC TCCCGGGAGA   60

GCCATAGTGG TCTGCGGAAC CGGTGAGTAC ACCGGAATTG CCAGGACGAC CGGGTCCTTT   120

CTTGGATCAA CCCGCTCAAT GCCTGGAGAT TTGGGCGTGC CCCCGCGAGA CCGCTAGCCG   180

AGTAGTGTTG GGTCGCGAAA GGCCTTGTGG TACTGCCTGA TAGGGTGCTT GC   232

5   (2) INFORMATION FOR SEQ ID NO:38:

         (i) SEQUENCE CHARACTERISTICS:
             (A) LENGTH: 240 base pairs
             (B) TYPE: nucleic acid
10   (C) STRANDEDNESS: double
             (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
             (A) DESCRIPTION: /desc = "DNA"
15
         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

GCAGAAAGCG TTTAGCCATG GCGTTAGTAC GAGTGTCGTG CAGCCTCCAG GACCCCCCCT   60

20 CCCGGGAGAG CCATAGTGGT CTGCGGAACC GGTGAGTACA CCGGAATCGC TGGGGTGACC   120

GGGTCCTTTC TTGGAACAAC CCGCTCAATA CCCAGAAATT TGGGCGTGCC CCCGCGAGAT   180

CACTAGCCGA GTAGTGTTGG GTCGCGAAAG GCCTTGTGGT ACTGCCTGAT AGGGTGCTTG   240
25
    (2) INFORMATION FOR SEQ ID NO:39:

         (i) SEQUENCE CHARACTERISTICS:
             (A) LENGTH: 44 base pairs
30   (B) TYPE: nucleic acid
             (C) STRANDEDNESS: single
             (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
35   (A) DESCRIPTION: /desc = "DNA"

         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

TGCTCTCTGG TCGCTGTCTG AAAGACAGCG TGGTCTCTCG TAAT   44
40
    (2) INFORMATION FOR SEQ ID NO:40:

         (i) SEQUENCE CHARACTERISTICS:
             (A) LENGTH: 44 base pairs
45   (B) TYPE: nucleic acid
             (C) STRANDEDNESS: single
             (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
50   (A) DESCRIPTION: /desc = "DNA"

         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

TGCTCTCTGG TCGCTGTCTG AAAGACTCCG TGGTCTCTCG TAAT   44
55
    (2) INFORMATION FOR SEQ ID NO:41:

         (i) SEQUENCE CHARACTERISTICS:
             (A) LENGTH: 44 base pairs
60   (B) TYPE: nucleic acid
             (C) STRANDEDNESS: single
             (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
65   (A) DESCRIPTION: /desc = "DNA"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

TGCTCTCTGG TCGCTGTCTG AATTTTTTTT TGGTCTCTCG TAAT   44

5 (2) INFORMATION FOR SEQ ID NO:42:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 14 base pairs
              (B) TYPE: nucleic acid
10   (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
               (A) DESCRIPTION: /desc = "DNA"
15
          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

     AGACCATTAC CAGA   14

20 (2) INFORMATION FOR SEQ ID NO:43:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 16 base pairs
              (B) TYPE: nucleic acid
25   (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
               (A) DESCRIPTION: /desc = "DNA"
30
          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

     GAGACCATTA CCAGAG   16

35 (2) INFORMATION FOR SEQ ID NO:44:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 18 base pairs
              (B) TYPE: nucleic acid
40   (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
               (A) DESCRIPTION: /desc = "DNA"
45
          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

     AGAGACCATT ACCAGAGA   18

50 (2) INFORMATION FOR SEQ ID NO:45:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 18 base pairs
              (B) TYPE: nucleic acid
55   (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
               (A) DESCRIPTION: /desc = "DNA"
60
          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

     AGAGACCATT ACAAGCGA   18

(2) INFORMATION FOR SEQ ID NO:46:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:

AGCGAACATT ACCAGAGA   18

(2) INFORMATION FOR SEQ ID NO:47:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:

AGAGACCAAC CAGAGA   16

(2) INFORMATION FOR SEQ ID NO:48:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 9 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:

AGAGACCAT   9

(2) INFORMATION FOR SEQ ID NO:49:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 9 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

TACCAGAGA   9

(2) INFORMATION FOR SEQ ID NO:50:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 10 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

ACCAGAGAGC   10

(2) INFORMATION FOR SEQ ID NO:51:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 10 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:

TCAGACAGCG   10

(2) INFORMATION FOR SEQ ID NO:52:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:

AGTGGTCTGC GGAACCGG   18

(2) INFORMATION FOR SEQ ID NO:53:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:

AGTGTCGTTT GGAACCGG   18

(2) INFORMATION FOR SEQ ID NO:54:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
5   (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
10   (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

AGTGTCGTAA GGAACCGG   18
15
(2) INFORMATION FOR SEQ ID NO:55:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
20   (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
25   (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

AGTGTCGTCA GGAACCGG   18
30
(2) INFORMATION FOR SEQ ID NO:56:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
35   (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
40   (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

AGTGTCGTGG AACCGG   16
45
(2) INFORMATION FOR SEQ ID NO:57:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
50   (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
55   (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

AGTGTCGTTT GGATCCGG   18
60

(2) INFORMATION FOR SEQ ID NO:58:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:

AGTGACGTTT GGAACCGG   18

(2) INFORMATION FOR SEQ ID NO:59:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 8 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

GGAACCGG   8

(2) INFORMATION FOR SEQ ID NO:60:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:

TTTTGTGAGT ACACCGGAAT   20

(2) INFORMATION FOR SEQ ID NO:61:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 14 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:

TTTTGTGAGT ACAC   14

(2) INFORMATION FOR SEQ ID NO:62:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

TGAGTACACC GGAAT   15

(2) INFORMATION FOR SEQ ID NO:63:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 33 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

ATTCCGGTGT ACTCACCGGT TCCAAACGAC ACT   33

(2) INFORMATION FOR SEQ ID NO:64:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

CAGCCTCCCC TTCTTGGA   18

(2) INFORMATION FOR SEQ ID NO:65:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:

AGTGTCGTTT GGAATTAATT   20

(2) INFORMATION FOR SEQ ID NO:66:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:

GCGAAAGGCC TTGTGG   16

(2) INFORMATION FOR SEQ ID NO:67:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:

ACAGCCTCCA GGACCC   16

(2) INFORMATION FOR SEQ ID NO:68:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

GCAGCCTCCA GGACCC   16

(2) INFORMATION FOR SEQ ID NO:69:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 193 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

CGTGGAGGCG ATCACACCGC AGACGTTGAT CAACATCCGG CCGGTGGTCG CCGCGATCAA   60

GGAGTTCTTC GGCACCAGCC AGCTGAGCCA ATTCATGGAC CAGAACAACC CGCTGTCGGG   120

GTTGACCCAC AAGCGCCGAC TGTCGGCGCT GGGGCCCGGC GGTCTGTCAC GTGAGCGTGC   180

CGGGCTGGAG GTC   193

(2) INFORMATION FOR SEQ ID NO:70:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 26 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

CGTGGAGGCG ATCACACCGC AGACGT   26

(2) INFORMATION FOR SEQ ID NO:71:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 25 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

GACCTCCAGC CCGGCACGCT CACGT   25

(2) INFORMATION FOR SEQ ID NO:72:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 128 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTGTC   120

ACGTGAGC   128

(2) INFORMATION FOR SEQ ID NO:73:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

CGCCGCGATC AAGGAGTTCT   20

(2) INFORMATION FOR SEQ ID NO:74:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 20 base pairs
5   (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (ii) MOLECULE TYPE: other nucleic acid
10   (A) DESCRIPTION: /desc = "DNA"

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

GCTCACGTGA CAGACCGCCG   20
15
(2) INFORMATION FOR SEQ ID NO:75:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 18 base pairs
20   (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (ii) MOLECULE TYPE: other nucleic acid
25   (A) DESCRIPTION: /desc = "DNA"

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

TGACAGACCG CCGGGCCC   18
30
(2) INFORMATION FOR SEQ ID NO:76:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 121 base pairs
35   (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (ii) MOLECULE TYPE: other nucleic acid
40   (A) DESCRIPTION: /desc = "DNA"

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60
45
CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTGTC   120

A   121

50 (2) INFORMATION FOR SEQ ID NO:77:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 18 base pairs
     (B) TYPE: nucleic acid
55   (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (ii) MOLECULE TYPE: other nucleic acid
     (A) DESCRIPTION: /desc = "DNA"
60
   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

AGACAGACCG CCGGGCCC   18

(2) INFORMATION FOR SEQ ID NO:78:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 121 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTGTC   120

T   121

(2) INFORMATION FOR SEQ ID NO:79:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:79:

ACAGACCGCC GGGCCCCA   18

(2) INFORMATION FOR SEQ ID NO:80:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 119 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:80:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTGT   119

(2) INFORMATION FOR SEQ ID NO:81:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:81:

CCAGACCGCC GGGCCCCA   18

(2) INFORMATION FOR SEQ ID NO:82:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 119 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:82:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTGG   119

(2) INFORMATION FOR SEQ ID NO:83:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:83:

CAGACCGCCG GGCCCCAG   18

(2) INFORMATION FOR SEQ ID NO:84:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 118 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:84:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTG   118

(2) INFORMATION FOR SEQ ID NO:85:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:85:

GAGACCGCCG GGCCCCAG   18

(2) INFORMATION FOR SEQ ID NO:86:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 118 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:86:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTC   118

(2) INFORMATION FOR SEQ ID NO:87:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:87:

CCGCCGGGCC CCAGCGCCGA   20

(2) INFORMATION FOR SEQ ID NO:88:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 114 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:88:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGG   114

(2) INFORMATION FOR SEQ ID NO:89:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:89:

GCGCCGGGCC CCAGCGCCGA   20

(2) INFORMATION FOR SEQ ID NO:90:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 114 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:90:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGC   114

(2) INFORMATION FOR SEQ ID NO:91:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:91:

CGGCCGGGCC CCAGCGCCGA   20

(2) INFORMATION FOR SEQ ID NO:92:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 114 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:92:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCCG   114

(2) INFORMATION FOR SEQ ID NO:93:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:93:

CGGGCCCCAG CGCCGACA   18

(2) INFORMATION FOR SEQ ID NO:94:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 110 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:94:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG   110

(2) INFORMATION FOR SEQ ID NO:95:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:95:

AGGGCCCCAG CGCCGACA   18

(2) INFORMATION FOR SEQ ID NO:96:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 110 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:96:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCT   110

(2) INFORMATION FOR SEQ ID NO:97:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:97:

CCCCAGCGCC GACAGTCG   18

(2) INFORMATION FOR SEQ ID NO:98:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 106 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:98:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGG   106

(2) INFORMATION FOR SEQ ID NO:99:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:99:

TCCCAGCGCC GACAGTCG   18

(2) INFORMATION FOR SEQ ID NO:100:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 106 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:100:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGA   106

(2) INFORMATION FOR SEQ ID NO:101:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 20 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:101:

CGCTTGTGGG TCAACCCCGA   20

(2) INFORMATION FOR SEQ ID NO:102:

     (i) SEQUENCE CHARACTERISTICS:
         (A) LENGTH: 87 base pairs
         (B) TYPE: nucleic acid
         (C) STRANDEDNESS: single
         (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
         (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:102:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCG   87

(2) INFORMATION FOR SEQ ID NO:103:

     (i) SEQUENCE CHARACTERISTICS:
         (A) LENGTH: 20 base pairs
         (B) TYPE: nucleic acid
         (C) STRANDEDNESS: single
         (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
         (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:103:

AGCTTGTGGG TCAACCCCGA   20

(2) INFORMATION FOR SEQ ID NO:104:

     (i) SEQUENCE CHARACTERISTICS:
         (A) LENGTH: 87 base pairs
         (B) TYPE: nucleic acid
         (C) STRANDEDNESS: single
         (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
         (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:104:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCT   87

(2) INFORMATION FOR SEQ ID NO:105:

     (i) SEQUENCE CHARACTERISTICS:
         (A) LENGTH: 16 base pairs
         (B) TYPE: nucleic acid
         (C) STRANDEDNESS: single
         (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
         (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:105:

GTGACAGAGT TGTTCT   16

(2) INFORMATION FOR SEQ ID NO:106:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:106:

GTGACAGATT GTTGTTCT   18

(2) INFORMATION FOR SEQ ID NO:107:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:107:

GTGACAGAGC GTTGTTCT   18

(2) INFORMATION FOR SEQ ID NO:108:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:108:

GTGACAGAAA GTTGTTCT   18

(2) INFORMATION FOR SEQ ID NO:109:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (ix) FEATURE:
       (A) NAME/KEY: misc_difference
       (B) LOCATION: replace(9..10, "")
       (D) OTHER INFORMATION: /note= "The residues at these
positions are spacers with abasic sugar labels."

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:109:

GTGACAGANN GTTGTTCT   18

(2) INFORMATION FOR SEQ ID NO:110:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:110:

TCACGTGAGC GTCCATGA   18

(2) INFORMATION FOR SEQ ID NO:111:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:111:

CAGACCGCGC ACAGCGGG.   18

(2) INFORMATION FOR SEQ ID NO:112:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 17 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:112:

GCTCACGATA CCCCGAC   17

(2) INFORMATION FOR SEQ ID NO:113:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:113:

TGCTCACGAT ACCCCGAC   18

(2) INFORMATION FOR SEQ ID NO:114:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:114:

CGCCGGGCGC TCAACCCC   18

(2) INFORMATION FOR SEQ ID NO:115:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:115:

ACAGTCGGGC GGTTGTTC   18

(2) INFORMATION FOR SEQ ID NO:116:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:116:

CGGGCCCCTA TGTGGGTC   18

(2) INFORMATION FOR SEQ ID NO:117:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:117:

CTCACGTGTA TCTGGTCC   18

(2) INFORMATION FOR SEQ ID NO:118:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:118:

TGACAGACGT TGTTCT   16

(2) INFORMATION FOR SEQ ID NO:119:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:119:

CCCCAGCGGC GTTGTTCT   18

(2) INFORMATION FOR SEQ ID NO:120:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:120:

GTGTCGTTTG GAACCG   16

(2) INFORMATION FOR SEQ ID NO:121:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:121:

TGGGCGTTGC TTGTGG   16

(2) INFORMATION FOR SEQ ID NO:122:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
5   (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
10   (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:122:

TTGGGCGTTG CTTGTGGT   18
15
(2) INFORMATION FOR SEQ ID NO:123:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 13 base pairs
20   (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
25   (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:123:

TCCTTGATCG CGG   13
30